



Duke Energy 1201 Main Street Capital Center Building Suite 1180 Columbia, SC 29201

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June 29, 2017

#### **VIA ELECTRONIC FILING**

The Honorable Jocelyn G. Boyd Chief Clerk/Administrator Public Service Commission of South Carolina 101 Executive Center Drive, Suite 100 Columbia, South Carolina 29210

Re: Duke Energy Progress, LLC – Monthly Fuel Report Docket No. 2006-176-E

Dear Mrs. Boyd:

Pursuant to the Commission's Orders in Docket No. 1977-354-E, enclosed for filing is Duke Energy Progress, LLC's ("DEP") Monthly Fuel Report in Docket No. 2006-176-E for the month of May 2017.

Please note that as a result of conversations with the Office of Regulatory Staff in DEP's recent fuel proceeding (Docket No. 2017-1-E), DEP and Duke Energy Carolinas, LLC are now reporting overcollection as a regulatory liability (a negative value) and undercollection as a regulatory asset (a positive value).

Should you have any questions regarding this matter, please do not hesitate to contact me at 803-988-7130.

Rebecu Din

Sincerely,

Rebecca J. Dulin

Enclosure

cc: Service List

### Duke Energy Progress Summary of Monthly Fuel Report

Schedule 1

Line No.	ltem	_	May 2017
1	Fuel and Fuel-related Costs excluding DERP incremental costs	\$	105,063,701
	MWH sales:		
2	Total System Sales		5,107,744
3	Less intersystem sales		343,444
4	Total sales less intersystem sales		4,764,300
5	Total fuel and fuel-related costs (¢/KWH) (Line 1/Line 4)		2.2052
6	Current fuel & fuel-related cost component (¢/KWH) (per Schedule 4)		2.3386
	Generation Mix (MWH):		
	Fossil (By Primary Fuel Type):		
7	Coal		363,076
8	Oil		6,594
9	Natural Gas - Combustion Turbine		99,722
10	Natural Gas - Combined Cycle		1,455,539
11	Total Fossil		1,924,932
12	Nuclear		2,651,788
13	Hydro - Conventional		82,563
14	Solar Distributed Generation		21,798
15	Total MWH generation		4,681,081

Note: Detail amounts may not add to totals shown due to rounding.

## Duke Energy Progress Details of Fuel and Fuel-Related Costs

<u>Description</u>	May 2	017
Fuel and Fuel-Related Costs:		
Steam Generation - Account 501		
0501110 coal consumed - steam	11	,578,670
0501310 fuel oil consumed - steam		871,582
Total Steam Generation - Account 501	12	2,450,252
Nuclear Generation - Account 518		
0518100 burnup of owned fuel	18	3,174,539
0518600 - Disposal Cost		-
Total Nuclear Generation - Account 518	18	3,174,539
Other Generation - Account 547		
0547000 natural gas consumed - Combustion Turbine	4	,436,447
0547000 natural gas consumed - Combined Cycle	43	3,462,214
0547200 fuel oil consumed		25,844
Total Other Generation - Account 547	47	<b>7,924,505</b>
Purchased Power and Net Interchange - Account 555		
Fuel and fuel-related component of purchased power	29	,386,865
PURPA purchased power capacity	4	,370,510
Total Purchased Power and Net Interchange - Account 555	33	3,757,375
Less fuel and fuel-related costs recovered through intersystem sales - Account 447	7	<b>7</b> ,861,030
Total Costs Included in Base Fuel Component	\$ 104	,445,641
Environmental Costs		
0509030, 0509212, 0557451 emission allowance expense	\$	1,296
0502020, 0502030, 0502040, 0502080, 0502090, 0548020 reagents expense		732,232
Emission Allowance Gains		-
Less reagents expense recovered through intersystem sales - Account 447		98,628
Less emissions expense recovered through intersystem sales - Account 447		16,841
Total Costs Included in Environmental Component		618,060
Fuel and Fuel-related Costs excluding DERP incremental costs	\$ 105	5,063,701
DERP Incremental Costs		110,896
Total Fuel and Fuel-related Costs	\$ 105	5,174,597

Notes: Detail amounts may not add to totals shown due to rounding.

### DUKE ENERGY PROGRESS PURCHASED POWER AND INTERCHANGE SOUTH CAROLINA

MAY 2017

Schedule 3, Purchases Page 1 of 2

Purchased Power	Total		Capacity		Non-capacity				
Marketers, Utilities, Other		\$		\$	mWh		Fuel \$		Non-fuel \$
Broad River Energy, LLC.	\$	2,048,605	\$	1,584,497	6,777	\$	464,108		_
City of Fayetteville		328,145		302,225	-		25,920		-
Haywood EMC		42,812		42,812	-		-		-
NCEMC		1,932,112		1,268,413	16,864		663,699		-
PJM Interconnection, LLC.		2,533		-	37		2,533		-
Smurfit Stone Container Corp		20,151		-	634		20,151		-
Southern Company Services		3,988,885		551,460	101,131		3,437,425		-
DE Carolinas - Native Load Transfer		4,495,561		· -	137,145		4,418,544	\$	77,017
DE Carolinas - Native Load Transfer Benefit		453,435		-	-		453,435		-
Energy Imbalance		(180)			(5)		(165)		(15)
Generation Imbalance		20,846			684		12,716		8,130 <sup>°</sup>
	\$	13,332,905	\$	3,749,407	263,267	\$	9,498,366	\$	85,132
Act 236 PURPA Purchases									
Renewable Energy	\$	19,012,711	\$	-	301,120	\$	19,012,711		_
Other Qualifying Facilities	·	5,246,298		-	75,670		5,246,298		_
	\$	24,259,009	\$	<u> </u>	376,790	\$	24,259,009	\$	-
Total Purchased Power	\$	37,591,914	\$	3,749,407	640,057	\$	33,757,375	\$	85,132

NOTE: Detail amounts may not add to totals shown due to rounding.

### DUKE ENERGY PROGRESS INTERSYSTEM SALES\* SOUTH CAROLINA

MAY 2017

Schedule 3, Sales Page 2 of 2

	<u> </u>	Total Cap		Capacity		N	Non-capacity			
Sales		\$		\$	mWh		Fuel \$		Non-fuel \$	
Market Based:										
NCEMC Purchase Power Agreement	\$	967,983	\$	652,500	8,167	\$	244,316	\$	71,167	
PJM Interconnection, LLC.		381,750		-	6,344		236,155		145,595	
Other:										
DE Carolinas - Native Load Transfer Benefit	\$	533,226		-	-	\$	533,226		-	
DE Carolinas - Native Load Transfer		7,306,544		-	328,932		6,962,802	\$	343,742	
Generation Imbalance		-		-	1		-		-	
Total Intersystem Sales	\$	9,189,503	\$	652,500	343,444	\$	7,976,499	\$	560,504	

<sup>\*</sup> Sales for resale other than native load priority.

NOTE: Detail amounts may not add to totals shown due to rounding.

### Duke Energy Progress (Over) / Under Recovery of Fuel Costs May 2017

Line No.			Total Residential	General Service Non-Demand	Demand	Lighting	Total
1	Actual System kWh sales	Input					4,764,300,151
2	DERP Net Metered kWh generation	Input					166,722
3	Adjusted System kWh sales	L1 + L2				_	4,764,466,873
4	Actual S.C. Retail kWh sales	Input	136,252,020	21,365,077	369,160,601	7,254,430	534,032,128
5	DERP Net Metered kWh generation	Input	137,776	7,858	21,089		166,722
6	Adjusted S.C. Retail kWh sales	L4 + L5	136,389,796	21,372,935	369,181,690	7,254,430	534,198,850
7	Actual S.C. Demand units (kw)	L32 / 31b *100			693,150		
Base fuel c	component of recovery - non-capacity						
8	Incurred System base fuel - non-capacity expense	Input					\$100,075,130
9	Eliminate avoided fuel benefit of S.C. net metering	Input					\$5,485
10	Adjusted Incurred System base fuel - non-capacity expense	L8 + L9				_	\$100,080,615
11	Adjusted Incurred System base fuel - non-capacity rate (¢/kWh)	L10 / L3 * 100					2.101
12	S.C. Retail portion of adjusted incurred system expense	L6 * L11 / 100	\$2,864,953	\$448,952	\$7,754,893	\$152,384	\$11,221,182
13	Assign 100 % of Avoided Fuel Benefit of S.C net metering	Input	(\$2,939)	(\$297)	(\$2,249)	\$0	(\$5,485)
14	S.C. Retail portion of incurred system expense	L12 + L13	\$2,862,014	\$448,655	\$7,752,644	\$152,384	\$11,215,697
15	Billed base fuel - non-capacity rate (¢/kWh) - Note 1	Input	2.228	2.229	2.229	2.229	2.229
16	Billed base fuel - non-capacity revenue	L4 * L15 /100	\$3,036,045	\$476,228	\$8,228,590	\$161,701	\$11,902,564
17	DERP NEM incentive - fuel component	Input	(\$698)	(\$70)	(\$534)	\$0	(\$1,303)
18	Adjusted S.C. billed base fuel - non-capacity revenue	L16 + L17	\$3,035,347	\$476,157	\$8,228,056	\$161,701	\$11,901,261
19	S.C. base fuel - non-capacity (over)/under recovery [See footnote]	L18 - L14	(\$173,333)	(\$27,502)	(\$475,412)	(\$9,317)	(\$685,564)
20	Adjustment - Economic Purchases	Input	\$0	\$0	\$0	\$0	\$0
21	Total S.C. base fuel - non-capacity (over)/under recovery [See footn	L19 + L20	(\$173,333)	(\$27,502)	(\$475,412)	(\$9,317)	(\$685,564)
	component of recovery - capacity						
22a	Incurred base fuel - capacity rates by class (¢/kWh)	L23 / L4 * 100	0.193	0.124			
22b	Incurred base fuel - capacity rate (¢/kW)	L23 / L7 * 100			29		
23	Incurred S.C. base fuel - capacity expense	Input	\$262,541	\$26,487	\$200,864		\$489,892
24a	Billed base fuel - capacity rates by class (¢/kWh)	Input	0.181	0.128			
24b	Billed base fuel - capacity rate (¢/kW)	Input			30		
25	Billed S.C. base fuel - capacity revenue	L24a * L4 /100	\$246,020	\$27,347	•	\$0	\$481,311
26	S.C. base fuel - capacity (over)/under recovery [See footnote]	L25 - L23	\$16,521	(\$860)	(\$7,080)	\$0	\$8,581
27 28	Adjustment  Total S.C. base fuel - capacity (over)/under recovery [See footnote]	Input L26 + L27	\$0 \$16,521	\$0 <b>(\$860)</b>	\$0 (\$7,080)	\$0 <b>\$0</b>	\$0 \$8,581
Environmo	ental component of recovery						
29a	Incurred environmental rates by class (¢/kWh)	L30 / L4 * 100	0.027	0.018			
29a 29b	Incurred environmental rate (¢/kW)	L30 / L4 100 L30 / L7 * 100	0.027	0.010	Л		
30	Incurred S.C. environmental expense	Input	\$37,127	\$3,746	\$28,405		\$69,278
31a	Billed environmental rates by class (¢/kWh)	Input	0.042		Ψ20,100		Ψ07,210
31b	Billed environmental rate (¢/kW)	Input	0.012	0.001	6		
32	Billed S.C. environmental revenue	L31a * L4 /100	\$56,773	\$6,623	\$ 41,589		\$104,985
33	S.C. environmental (over)/under recovery [See footnote]	L32 - L30	(\$19,646)	(\$2,877)	(\$13,184)	\$0	(\$35,707)
34	Adjustment	Input	\$0	\$0	\$0	\$0	\$0
35	Total S.C. environmental (over)/under recovery [See footnote]	L33 + L34	(\$19,646)		(\$13,184)	\$0	(\$35,707)
36	Total (over)/under recovery [See footnote]	L21 + L28 + L35	(\$176,458)	(\$31,239)	(\$495,676)	(\$9,317)	(\$712,690)

### Duke Energy Progress (Over) / Under Recovery of Fuel Costs May 2017

Year 2016-2017

			General Service			
Cumulative (over) / under recovery	Cumulative	Total Residential	Non-Demand	Demand	Lighting	Total
Balance ending February 2017	7,300,819					_
March 2017 - actual	9,335,254	\$692,916	\$94,251	\$1,212,327	\$34,941	\$2,034,435
April 2017 - actual	10,820,203	\$433,883	\$61,958	\$966,533	\$22,575	\$1,484,949
May 2017 - actual	10,107,513	(\$176,458)	(\$31,239)	(\$495,676)	(\$9,317)	(\$712,690)
June 2017 - forecast	10,806,866	\$231,927	\$31,312	\$426,088	\$10,026	\$699,353
July 2017 - forecast	11,043,070	\$36,485	\$9,874	\$185,457	\$4,388	\$236,204
August 2017 - forecast	10,804,765	(\$179,766)	(\$17,860)	(\$37,146)	(\$3,533)	(\$238,305)
September 2017 - forecast	9,151,784	(\$549,872)	(\$58,587)	(\$1,022,620)	(\$21,902)	(\$1,652,981)
October 2017 - forecast	7,644,580	(\$350,248)	(\$70,308)	(\$1,056,817)	(\$29,831)	(\$1,507,204)
November 2017 - forecast	6,253,993	(\$328,097)	(\$60,124)	(\$978,699)	(\$23,667)	(\$1,390,587)
December 2017 - forecast	5,727,929	(\$295,154)	(\$642)	(\$227,919)	(\$2,349)	(\$526,064)
January 2018 - forecast	5,283,718	(\$454,005)	(\$2,756)	\$14,671	(\$2,121)	(\$444,211)
February 2018 - forecast	3,872,127	(\$734,961)	(\$37,267)	(\$623,254)	(\$16,109)	(\$1,411,591)
March 2018 - forecast	3,585,312	(\$83,706)	(\$1,338)	(\$197,767)	(\$4,004)	(\$286,815)
April 2018 - forecast	2,633,567	(\$152,369)	(\$42,336)	(\$737,744)	(\$19,296)	(\$951,745)
May 2018 - forecast	1,862,742	(\$48,739)	(\$42,497)	(\$662,761)	(\$16,828)	(\$770,825)
June 2018 - forecast	1,470,328	(\$28,075)	(\$14,844)	(\$343,943)	(\$5,552)	(\$392,414)

Line No.			Residential	Commercial	Industrial	Total
Distributed	Energy Resource Program component of recovery: incremental co	sts				
37	Incurred S.C. DERP incremental expense	Input	\$59,431	\$30,501	\$20,964	\$110,896
38	Billed S.C. DERP incremental rates by account (\$/account)	Input	0.35	0.70	62.56	
39	Billed S.C. DERP incremental revenue	Input	\$50,549	\$23,565	\$17,263	\$91,377
40	S.C. DERP incremental (over)/under recovery [See footnote]	L39 - L37	\$8,882	\$6,936	\$3,701	\$19,519
41	Adjustment	Input	\$0	\$0	\$0	\$0
42	Total S.C. DERP incremental (over)/under recovery [See footnote]	L40 + L41	\$8,882	\$6,936	\$3,701	\$19,519

Year	201	6-2017
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Year 2016-2017					
Cumulative (over) / under recovery	Cumulative	Residential	Commercial	Industrial	Total
Balance ending February 2017	367,732	•	•	•	
March 2017 - actual	348,200	(\$11,829)	(\$3,912)	(\$3,791)	(\$19,532)
April 2017 - actual	356,408	\$3,069	\$3,581	\$1,558	\$8,208
May 2017 - actual	375,927	\$8,882	\$6,936	\$3,701	\$19,519
June 2017 - forecast	479,605	\$53,374	\$31,162	\$19,142	\$103,678
July 2017 - forecast	440,487	(\$23,973)	(\$28,946)	\$13,801	(\$39,118)
August 2017 - forecast	420,762	(\$13,530)	(\$23,755)	\$17,560	(\$19,725)
September 2017 - forecast	418,873	(\$4,636)	(\$18,281)	\$21,028	(\$1,889)
October 2017 - forecast	436,585	\$5,777	(\$12,855)	\$24,790	\$17,712
November 2017 - forecast	508,450	\$34,931	\$2,010	\$34,924	\$71,865
December 2017 - forecast	596,691	\$43,796	\$6,368	\$38,077	\$88,241
January 2018 - forecast	617,108	\$8,143	(\$13,008)	\$25,282	\$20,417
February 2018 - forecast	636,844	\$7,658	(\$13,129)	\$25,207	\$19,736
March 2018 - forecast	656,289	\$7,259	(\$13,103)	\$25,289	\$19,445
April 2018 - forecast	675,520	\$7,105	(\$13,043)	\$25,169	\$19,231
May 2018 - forecast	694,128	\$6,826	(\$13,347)	\$25,129	\$18,608
June 2018 - forecast	712,451	\$6,634	(\$13,399)	\$25,088	\$18,323

### Notes:

Detail amounts may not recalculate due to percentages presented as rounded.

Presentation of over or under collected amounts reflects a regulatory asset or liability. Over collections, or regulatory liabilities, are shown as negative amounts. Under collections, or regulatory assets, are shown as positive amounts.

\_/1 Total residential billed fuel rate is a composite rate reflecting the approved residential rate of 2.246 and RECD 5% discount.

## Duke Energy Progress Fuel and Fuel Related Cost Report May 2017

Description	Weatherspoon CT	Lee CC	Sutton CC/CT	Robinson Nuclear	Asheville Steam	Asheville CT	Roxboro Steam	Mayo Steam
Cost of Fuel Purchased (\$)								
Coal	-	-	-	-	\$2,960,377	-	\$14,380,917	\$1,132,428
Oil	-	-	-	(25,252)	-	-	984,480	212,331
Gas - CC	-	15,354,430	8,345,245	-	-	-	-	-
Gas - CT	47	-	-	- (40= 0=0)	-	548,757	-	-
Total	\$47	\$15,354,430	\$8,345,245	(\$25,252)	\$2,960,377	\$548,757	\$15,365,397	\$1,344,759
Average Cost of Fuel Purchased (¢/MBTU	)							
Coal	-	-	-	-	338.34	-	324.47	348.85
Oil	-	-	-	2,446.90	-	-	1,286.01	1,288.89
Gas - CC	-	425.46	563.02	-	-	-	-	-
Gas - CT Weighted Average		425.46	563.02	2,446.90	338.34	416.63 416.63	340.79	394.25
weighted Average	-	423.40	303.02	2,440.90	330.34	410.03	340.79	394.23
Cost of Fuel Burned (\$) Coal	-	_	_	_	\$2,263,669	_	\$8,206,811	\$1,108,190
Oil - CC	_	-	11,577	_	-	-	-	-
Oil - Steam/CT	-	-	-	-	23,239	1,293	655,170	193,172
Gas - CC	-	15,354,430	8,345,245	-	-	-	· -	-
Gas - CT	47	-	-	-	-	548,757	-	-
Nuclear	-	-	-	4,099,612	-	-	-	-
Total	\$47	\$15,354,430	\$8,356,822	4,099,612	\$2,286,908	\$550,050	\$8,861,981	\$1,301,362
Average Cost of Fuel Burned (¢/MBTU) Coal	_	_	_	_	300.06	_	323.56	317.10
Oil - CC	-	_	1,947.55	-	-	_	-	-
Oil - Steam/CT	-	-	-	-	1,343.29	1,346.88	1,307.65	1,330.29
Gas - CC	-	425.46	563.02	-	-	, -	, -	, -
Gas - CT	-	-	-	-	-	416.63	-	-
Nuclear	-	-	-	69.31	-	-	-	-
Weighted Average	-	425.46	563.58	69.31	302.44	417.31	342.62	357.52
Average Cost of Generation (¢/kWh)								
Coal	-	-	-	-	3.63	-	3.00	4.03
Oil - CC	-	-	22.44	-	-	-	-	-
Oil - Steam/CT	-	-	-	-	-	15.48	10.80	16.92
Gas - CC	-	3.04	3.96	-	-	-	-	-
Gas - CT	-	-	-	- 0.70	-	4.99	-	-
Nuclear Weighted Average	<u> </u>	3.04	3.97	0.72 0.72	3.69	5.00	3.17	4.55
Burned MBTU's Coal			-		754,415	_	2,536,411	240 476
Oil - CC	-	-	- 594	-	754,415	-	2,536,411	349,476
Oil - Steam/CT	-	-	-	-	1,730	96	50,103	- 14,521
Gas - CC	-	3,608,943	1,482,217	-	-	-	-	-
Gas - CT	-	-	, , -	-	-	131,713	-	-
Nuclear	-	-	-	5,914,478	-	-	-	-
Total	-	3,608,943	1,482,811	5,914,478	756,145	131,809	2,586,514	363,997
Net Generation (mWh)								
Coal	-	-	-	-	62,414	-	273,180	27,483
Oil - CC	-	-	52	-	-	-	-	-
Oil - Steam/CT	-	-	(39)	-	(468)	8	6,067	1,142
Gas - CC	- (70)	505,482	210,554	-	-	-	-	-
Gas - CT	(73)	-	-	-	-	10,987	-	-
Nuclear	-	-	-	566,109	-	-	-	-
Hydro (Total System) Solar (Total System)								
Total	(73)	505,482	210,567	566,109	61,946	10,995	279,247	28,625
Cost of Paggants Consumed (#)								
Cost of Reagents Consumed (\$) Ammonia	-	-	_	-	_	_	\$147,368	\$21,571
Limestone	-	-	-	- -	- 74,142	-	228,540	41,393
Re-emission Chemical	-	-	-	-	-	-	43,832	-
Sorbents	-	-	-	-	17,135	-	89,151	-
Urea		-	-	-	41,064		-	
Total	-	-	-	-	132,341	-	508,891	62,963
	Notes:							

Notes:

Detail amounts may not add to totals shown due to rounding.

Schedule excludes in-transit, terminal and tolling agreement activity.

Cents/MBTU and cents/kWh are not computed when costs and/or net generation is negative.

Fuel cost information on this report does not reflect intercompany sharing of fuel-related merger savings between Duke Energy Carolinas and Duke Energy Progress.

Lee and Wayne oil burn is associated with inventory consumption shown on Schedule 6 for Wayne.

### Duke Energy Progress Fuel and Fuel Related Cost Report May 2017

					Smith Energy			
	Brunswick	Blewett	Wayne County	Darlington	Complex	Harris	Current	Total 12 ME
Description	Nuclear	СТ	СТ	СТ	CC/CT	Nuclear	Month	May 2017
Cost of Fuel Purchased (\$)							<b>640 470 700</b>	<b>#</b> 0.40.000.000
Coal Oil	- (11,770)	-	-	-	-	- 2,488	\$18,473,722 1,162,277	\$348,383,239
Gas - CC	(11,770)	-	-	-	- 19,762,539	2,400	43,462,214	17,849,018 552,242,322
Gas - CC Gas - CT	_	-	485,916	105,006	3,296,721	- -	4,436,447	121,603,492
Total	(11,770)	-	\$485,916	\$105,006	\$23,059,260	2,488	\$67,534,660	\$1,040,078,071
Average Cost of Fuel Purchased (¢/MBTU								
Coal	_	_	_	_	_	_	328.03	311.81
Oil	-	_	_	_	-	241.09	1,249.40	1,221.11
Gas - CC	-	-	_	-	379.42	-	421.97	422.64
Gas - CT	-	-	369.96	400.85	375.72	-	380.26	367.52
Weighted Average	-	-	369.96	400.85	378.88	241.09	392.84	375.56
Cost of Fuel Burned (\$)								
Coal	-	-	-	-	-	-	\$11,578,670	\$364,271,972
Oil - CC	-	-	-	-	277	-	11,854	276,720
Oil - Steam/CT	-	7,962	3,592	1,144	-	-	885,572	17,674,455
Gas - CC	-	-	-	-	19,762,539	-	43,462,214	552,242,322
Gas - CT	-	-	485,916	105,006	3,296,721	-	4,436,447	121,603,492
Nuclear	9,182,435	-	<u> </u>	-	-	4,892,492	18,174,539	192,646,376
Total	\$9,182,435	7,961.70	\$489,508	\$106,150	\$23,059,537	\$4,892,492	\$78,549,296	\$1,248,715,337
Average Cost of Fuel Burned (¢/MBTU)								
Coal	-	-	-	-	-	-	318.07	317.13
Oil - CC	-	-	-	-	1,629.41	-	1,938.71	1,802.90
Oil - Steam/CT	-	1,667.25	1,743.69	1,707.46	-	-	1,317.80	1,350.56
Gas - CC	-	-	-	-	379.42	-	421.97	422.64
Gas - CT Nuclear	- 63.05	-	369.96	400.85	375.72 -	- 65.45	380.26 65.02	367.52 64.32
Weighted Average	63.05	1,667.25	372.11	404.18	378.89	65.45	182.13	215.50
Wolgined / Wordge	00.00	1,007.20	072.11	404.10	070.00	00.40	102.10	210.00
Average Cost of Generation (¢/kWh)								
Coal	-	-	-	-	-	-	3.19	3.33
Oil - CC	-	-	-	-	27.70	-	22.54	51.74
Oil - Steam/CT Gas - CC	-	-	20.53	-	2.67	-	13.54	17.73
Gas - CC Gas - CT	-	-	4.37	7.06	4.33	-	2.99 4.45	3.00 4.18
Nuclear	0.67	-	- 4.37	7.00	-	0.69	0.69	0.68
Weighted Average	0.67	-	4.40	8.16	2.83	0.69	1.68	2.04
Burned MBTU's								
Coal	_	_	_	_	_	_	3,640,302	114,865,503
Oil - CC	_	_	_	_	17	_	611	15,349
Oil - Steam/CT	-	478	206	67	-	-	67,201	1,308,679
Gas - CC	-	-	-	-	5,208,660	-	10,299,820	130,664,183
Gas - CT	-	-	131,343	26,196	877,438	-	1,166,690	33,087,867
Nuclear	14,564,315	-	-	-	-	7,475,119	27,953,912	299,502,324
Total	14,564,315	478	131,549	26,263	6,086,115	7,475,119	43,128,536	579,443,905
Net Generation (mWh)								
Coal	-	-	-	-	-	-	363,076	10,929,761
Oil - CC	-	-	-	-	1	-	53	535
Oil - Steam/CT	-	-	17	(187)	-	-	6,542	99,689
Gas - CC	-	-	-	-	739,503	-	1,455,539	18,384,568
Gas - CT	-	-	11,115	1,488	76,206	-	99,722	2,910,791
Nuclear	1,376,440	-	-	-	-	709,239	2,651,788	28,370,870
Hydro (Total System)							82,563	394,783
Solar (Total System) Total	1,376,440	_	11,132	1,301	815,710	709,239	21,798 4,681,081	206,374 61,297,371
Ocat of Bos ments On 140								
Cost of Reagents Consumed (\$) Ammonia	-	-	-	-	\$28,036	-	\$196,975	\$3,097,070
Limestone	-	-	-	-	-	-	344,076	10,636,139
Re-emission Chemical	-	-	-	-	-	-	43,832	159,342
Sorbents	-	-	-	-	-	-	106,285	3,538,866
Urea	-	-	-	-	<u> </u>	-	41,064	1,029,774
Total	-	-	-	-	28,036	-	732,232	18,461,192

### Duke Energy Progress Fuel & Fuel-related Consumption and Inventory Report May 2017

Description	Weatherspoon	Lee	Sutton	Robinson	Asheville
Coal Data:					
Beginning balance	-	-	-	-	139,380
Tons received during period	-	-	-	-	34,589
Inventory adjustments	-	-	-	-	-
Tons burned during period	-	-	-	-	29,961
Ending balance	-	-	-	-	144,008
MBTUs per ton burned	-	-	-	-	25.18
Cost of ending inventory (\$/ton)	-	-	-	-	75.55
Oil Data:					
Beginning balance	653,933	-	3,164,645	85,521	3,072,142
Gallons received during period	-	-	-	(7,481)	-
Miscellaneous use and adjustments	(126)	-	-	-	(3,057)
Gallons burned during period	-	-	4,128	-	13,284
Ending balance	653,807	-	3,160,517	78,040	3,055,801
Cost of ending inventory (\$/gal)	2.11	-	2.80	2.62	1.85
Gas Data:					
Beginning balance	-	-	-	-	-
MCF received during period	-	3,507,889	1,472,076	-	127,097
MCF burned during period	-	3,507,889	1,472,076	-	127,097
Ending balance	-	-	-	-	-
Limestone/Lime Data:					
Beginning balance	-	-	-	-	9,772
Tons received during period	-	-	-	-	1,720
Inventory adjustments	-	-	-	-	-
Tons consumed during period	-	-	-	-	1,644
Ending balance	-	-	-	-	9,848
Cost of ending inventory (\$/ton)	-	-	-	-	41.96

### Notes:

Detail amounts may not add to totals shown due to rounding.

Schedule excludes in-transit, terminal and tolling agreement activity.

Gas is burned as received; therefore, inventory balances are not maintained.

The oil inventory data for Wayne reflects the common usage of the oil tank used for both Wayne and Lee units.

### Duke Energy Progress Fuel & Fuel-related Consumption and Inventory Report May 2017

Description	Roxboro	Мауо	Brunswick	Blewett	Wayne County
Coal Data:					
Beginning balance	1,291,838	543,123	-	-	-
Tons received during period	177,486	12,877	-	-	-
Inventory adjustments	-	-	-	-	-
Tons burned during period	100,530	13,661	-	-	-
Ending balance	1,368,794	542,339	-	-	-
MBTUs per ton burned	25.23	25.58	-	-	-
Cost of ending inventory (\$/ton)	81.60	81.12	-	-	-
Oil Data:					
Beginning balance	255,691	286,145	178,651	797,106	11,982,942
Gallons received during period	554,734	119,377	-	-	-
Miscellaneous use and adjustments	(7,458)	(1,110)	-	-	-
Gallons burned during period	362,765	105,397	9,040	3,398	1,492
Ending balance	440,202	299,015	169,611	793,708	11,981,450
Cost of ending inventory (\$/gal)	1.81	1.83	2.62	2.34	2.41
Gas Data:					
Beginning balance	-	-	-	-	-
MCF received during period	-	-	-	-	127,962
MCF burned during period	-	-	-	-	127,962
Ending balance	-	-	-	-	-
Limestone/Lime Data:					
Beginning balance	90,615	21,935	-	-	-
Tons received during period	13,425	48	-	-	-
Inventory adjustments	-	-	-	-	-
Tons consumed during period	5,969	1,038	-	-	-
Ending balance	98,071	20,945	-	-	-
Cost of ending inventory (\$/ton)	36.12	37.48	-	-	-

### Duke Energy Progress Fuel & Fuel-related Consumption and Inventory Report May 2017

		Smith Energy		Current	Total 12 ME
Description	Darlington	Complex	Harris	Month	May 2017
Coal Data:					
Beginning balance	_	_	_	1,974,341	2,168,365
Tons received during period	_	_	_	224,952	4,405,710
Inventory adjustments	_	_	_	-	36,131
Tons burned during period	_	_	_	144,152	4,555,065
Ending balance	_	_	_	2,055,141	2,055,141
MBTUs per ton burned	_	_	_	25.25	25.22
Cost of ending inventory (\$/ton)	-	-	-	81.05	81.05
Oil Data:					
Beginning balance	10,028,580	8,141,563	305,003	38,951,922	38,395,952
Gallons received during period	-	-	7,480	674,110	10,592,057
Miscellaneous use and adjustments	-	-	-	(11,751)	(259,943)
Gallons burned during period	485	119	45,043	545,151	9,658,936
Ending balance	10,028,095	8,141,444	267,440	39,069,130	39,069,130
Cost of ending inventory (\$/gal)	2.36	2.32	2.62	2.35	2.35
Gas Data:					
Beginning balance	-	-	-	-	-
MCF received during period	25,319	5,840,712	-	11,101,055	158,515,167
MCF burned during period	25,319	5,840,712	-	11,101,055	158,515,167
Ending balance	-	-	-	-	-
Limestone/Lime Data:					
Beginning balance	-	-	-	122,322	135,436
Tons received during period	-	-	-	15,193	295,595
Inventory adjustments	-	-	-	-	(10,346)
Tons consumed during period	-	-	-	8,651	291,821
Ending balance	-	-	-	128,864	128,864
Cost of ending inventory (\$/ton)	-	-	-	36.78	36.78

# DUKE ENERGY PROGRESS ANALYSIS OF COAL PURCHASED MAY 2017

STATION	ТҮРЕ	QUANTITY OF TONS DELIVERED	DELIVERED COST	DELIVERED COST PER TON
ASHEVILLE	SPOT CONTRACT	- 34,589	\$ - 2,811,986	- 81.30
	ADJUSTMENTS TOTAL	34,589	148,391 2,960,377	- 85.59
MAYO	SPOT CONTRACT ADJUSTMENTS	- 12,877 -	- 973,005 159,424	- 75.56 -
	TOTAL	12,877	1,132,428	87.95
ROXBORO	SPOT	-	(4,333)	<u>-</u>
	CONTRACT ADJUSTMENTS	177,486	13,486,490 898,760	75.99 
	TOTAL	177,486	14,380,917	81.03
ALL PLANTS	SPOT CONTRACT ADJUSTMENTS	- 224,952 -	(4,333) 17,271,480 1,206,574	- 76.78 -
	TOTAL	224,952	\$ 18,473,722	\$ 82.12

#### Schedule 8

# DUKE ENERGY PROGRESS ANALYSIS OF COAL QUALITY RECEIVED MAY 2017

STATION	PERCENT	PERCENT	HEAT	PERCENT
	MOISTURE	ASH	VALUE	SULFUR
ASHEVILLE	6.70	9.14	12,648	1.86
MAYO	7.51	7.23	12,605	1.44
ROXBORO	6.82	9.67	12,486	1.52

## DUKE ENERGY PROGRESS ANALYSIS OF OIL PURCHASED MAY 2017

		HARRIS		МАҮО	R(	DBINSON	R	OXBORO
VENDOR	Seln	na Tank Farm	Greens	boro Tank Farm	Selm	a Tank Farm	Greens	boro Tank Farm
SPOT/CONTRACT		Contract		Contract		Contract		Contract
SULFUR CONTENT %		0		0		0		0
GALLONS RECEIVED		7,480		119,377		(7,481)		554,734
TOTAL DELIVERED COST	\$	2,488	\$	212,331	\$	(25,252)	\$	984,480
DELIVERED COST/GALLON	\$	0.33	\$	1.78	\$	3.38	\$	1.77
BTU/GALLON		138,000		138,000		138,000		138,000

#### Note:

A price adjustment of \$(11,770) for the Brunswick station is excluded.

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### Duke Energy Progress Power Plant Performance Data Twelve Month Summary

June, 2016 - May, 2017 Nuclear Units

Unit Name	Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Brunswick 1	8,156,912	938	99.27	97.89
Brunswick 2	7,137,720	932	87.43	90.20
Harris 1	7,496,470	928	92.22	90.25
Robinson 2	5,579,768	741	85.96	84.80

### Twelve Month Summary June, 2016 through May, 2017 Combined Cycle Units

Unit Name		Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Lee Energy Complex	1A	1,281,862	204	71.83	82.52
Lee Energy Complex	1B	1,287,348	203	72.49	86.27
Lee Energy Complex	1C	1,293,998	205	72.21	85.82
Lee Energy Complex	ST1	2,383,942	379	71.88	81.02
Lee Energy Complex	Block Total	6,247,150	990	72.07	83.07
Richmond County CC	7	982,151	177	63.40	71.43
Richmond County CC	8	958,631	176	62.32	70.71
Richmond County CC	ST4	1,117,287	171	74.67	72.94
Richmond County CC	9	1,349,709	199	77.46	85.26
Richmond County CC	10	1,370,246	199	78.64	85.72
Richmond County CC	ST5	1,821,968	249	83.70	88.39
Richmond County CC	Block Total	7,599,992	1,170	74.18	80.12
Sutton Energy Complex	1A	1,393,763	206	77.34	91.25
Sutton Energy Complex	1B	1,422,061	206	78.91	92.19
Sutton Energy Complex	ST1	1,729,208	266	74.28	92.98
Sutton Energy Complex	Block Total	4,545,032	677	76.62	91.76

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

## Duke Energy Progress Power Plant Performance Data Twelve Month Summary

June, 2016 through May, 2017

### **Intermediate Steam Units**

Unit Name	Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Mayo 1	1,964,433	738	30.38	86.15
Roxboro 2	2,305,918	672	39.16	95.91
Roxboro 3	2,328,836	695	38.25	90.68
Roxboro 4	1,920,919	706	31.08	79.42

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

### Twelve Month Summary June, 2016 through May, 2017 Other Cycling Steam Units

Unit Name		Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Operating Availability (%)
Asheville	1	686,531	191	41.09	77.87
Asheville	2	642,922	191	38.48	81.02
Roxboro	1	1,142,273	380	34.35	94.94

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

### Twelve Month Summary June, 2016 through May, 2017 Combustion Turbine Stations

Station Name	Net Generation (mWh)	Capacity Rating (mW)	Operating Availability (%)
Asheville CT	210,587	351	88.58
Blewett CT	-12	61	98.51
Darlington CT	114,561	838	89.60
Richmond County CT	2,081,499	859	92.71
Sutton CT	-467	70	97.01
Wayne County CT	534,807	919	94.47
Weatherspoon CT	364	149	90.07

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

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### Twelve Month Summary June, 2016 through May, 2017 Hydroelectric Stations

Station Name	Net Generation (mWh)	Capacity Rating (mW)	Operating Availability (%)
Blewett	76,388	27.0	78.60
Marshall	3,585	4.0	30.99
Tillery	113,848	84.0	93.70
Walters	200,962	113.0	99.12

- Effective January 2017, a change in capacity rating methodology could impact performance trending against historical results reported prior to January 2017.
- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.